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How auction methods can boost non-performing loan sales

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Table of Contents

Introduction

The Nobel Prize for economics has this year been awarded to two scientists that have made significant contributions to the knowledge and development of auctions. Every day, auctions are held around the world in numerous disciplines from second hand items on eBay to expensive art at Sotheby's. Auctions are also used to sell non-performing loans (NPL) from banks to investors. Due to Covid-19 the market for non-performing loans is currently experiencing lower transaction volumes and bid-offer spreads are larger than usual indicating market failure. Well-designed auctions can help boost the NPL market, a topic of increasing importance due to the expected wave of new NPL after the pandemic. In this article we describe how different auction formats are relevant for different types of NPL and how the NPL Markets platform provides the flexibility to use the different formats.

Auction theory

The importance of auctions for our economy is confirmed by the winners of the Economy Nobel Prize 2020. Stanford economists Paul Milgrom and Robert Wilson have won the prize for their studies on how auctions can be made more efficient.

To appreciate their contributions we have to understand the theory behind auctions a little better. Generally, auctions depend on three factors. Firstly the auction format after which the auction type is named. For example, in a Dutch Auction the auctioneer begins with a high asking price and lowers it until some participant accepts the price. A Japanese auction starts with a low price. The displayed price increases continuously and each buyer may exit the arena at any moment. When a single bidder remains in the arena the auction stops and the bidder wins the item for the displayed price. English auctions incrementally increase the price with open outcry to disclose the leading bid. The second factor relates to the auctioned object. Do different bidders have a different value for the object or is the value the same for all bidders? The last factor is the uncertainty and potential information asymmetry. If bidders have a different level of information about the auctioned item they will also come to different prices.

Auctioned items often have in part a private value and a common value, respectively. For instance, the value for a meet and greet with a celebrity can have a high value for you, but it can have a low value for someone else. In most cases there is a considerable common value in the auctioned item. This means that part of the value is common to all bidders. In practice, private information about the auctioned item leads to differences in the perceived common value. If you are bidding with other professionals on an item and you have the highest bid your bid might be too high as the others had information about the item that did not justify this higher amount. This typically leads to lower bids in general and is called the winner's curse. Robert Wilson was the first to show that with greater uncertainty bidders will be more cautious which leads to a lower price.

Paul Milgrom analyzed the presence of the winner's curse in both the Dutch and English auction. In English auctions the price starts low and increases with new bids. The remaining bidders will observe other bidders dropping out and will acquire information about other bidder's valuations of the item. As they have more information they are less likely to bid below their estimated value. With a Dutch auction the price starts high and decreases until a bidder accepts the displayed price. In the sealed bid and Dutch auctions the bidders have no information about the other bidder's valuation and are afraid they bid too much. This increases the winner's curse effects which results, generally, in a lower price. A seller should try to provide as much information about the value of the auctioned item to minimize the uncertainty and make the bidder comfortable with their price. This reduces the winner's curse and increases the final price. With auction theory it is possible to identify the bidders strategic behaviour by explaining the three aforementioned auction factors. Correctly using the auction theory can help in designing an auction in such a way that it creates as much value as possible.

The relevance of auctions for the market of NPLs

In 2017 the Council of the European Union agreed an action plan to address the problem of non-performing loans in the banking sector. The Council believes that a European-wide plan can help lower the stock of NPL on bank balance sheets. The action plan consists of several measures including strengthening the secondary NPL market. On December 16th, the European Commission published a new action plan including the creation of a data hub to increase transparency with post-trade transaction details to overcome uncertainty and help the market to become more efficient (NPL Markets 2020b). In the market for NPL, the term auction typically refers to a clock auction like an English auction whereas the common sales methods by means of first price sealed bid is often referred to as a tender.

Gaffeo and Mazzocchi (2017) analyzed the market for NPL in several European countries and observed that it is failing due to low transaction volumes and large bid-ask spreads. They see three inefficiencies: 1) informational asymmetries, 2) barriers to entry, and 3) collusive behaviors. A well-functioning digital marketplace with auction features can address the barriers to entry and the collusive behavior. The data hub idea proposed by the European Commission could help overcome informational asymmetries.

Gaffeo and Mazzocchi argue that an auction structure where potential buyers can put several bids on segments of the portfolio, sometimes called by market practitioners a partial bid or by academics a product-mix auction, increases the potential total sale price and may lower the barriers to entry. For large NPL portfolios, say, exceeding a gross book value of EUR 1bn, it is well known that the number of potential bidders is much reduced compared to smaller portfolio sales of a GBV of, say, 100m or 200m. Large portfolios are almost always heterogenous with some investors having a stronger appetite for the secured portion of the portfolio whereas others prefer the unsecured part. Some investors might be interested in specific segments of the portfolio or specific loans or pieces of collateral. Allowing investors to put bids on segments gives the seller better flexibility in selecting what part of the portfolio will be sold to which investor. The investor can bid on only those loans of interest subject to a minimum and maximum transaction volume. Any sales process other than a sealed bid tender needs to be carefully explained and justified not to deter investors.

While a partial bid/product-mix auction may be optimal for larger heterogeneous transactions, for smaller transactions other auctions format might work best. An English auction might achieve optimal results for smaller homogeneous pools of unsecured consumer NPL where the cost of due diligence is modest and many local investors are ready to participate. Research suggests that bidders in a competitive auction want to win and the emotions of a clock auction with incremental price increases may generate more revenue than a sealed bid auction without any competitive emotions. On the other hand, for complex assets such as secured corporate NPL which require expensive due diligence, investors may be deterred from having to reveal their bids in an English auction. For complex portfolios other elements but price may impact the decision of the seller like bidders' comments on the terms of the sales and purchase agreement or details around the source of funds or servicing arrangements. For complex assets with a large private value component and a resulting lack of consensus the sealed bid auction may offer higher revenues to the seller as all interested investors will participate including those that do not want to reveal their bids to competitors. Sealed bid tenders offer the chance to the seller that the winner bids substantially more than the second highest bidder. However, fear of the winner's curse might depress prices in a sealed bid if uncertainty is high.

Practical considerations for auctions on NPL transaction platforms

On September 25th the European Commission organized a roundtable on tackling NPL in the aftermath of the COVID-19 pandemic and the use of transaction platforms (NPL Markets 2020a). Some market participants expressed concerns about the disclosure of auction bids or final trade prices given high due diligence and price discovery costs. As discussed above, a well designed auction process can achieve optimal outcomes with maximum investor participation. A marketplace transaction platform can offer a fast and cost efficient execution with access to the most suitable investors. The platform should offer the flexibility for the seller to select the most appropriate sales process and auction format for their NPL portfolio. An ebay-style classic online auction process might work well for a highly competitive smaller portfolio sale of unsecured consumer loans. However, the same process might not attract enough bidders for complex secured corporate claims with high cost of price discovery.

In addition to the auction type also the number of bidders can be an important factor for the auction. If an investor is put in competition with 30 other investors for a complex portfolio the investor might not want to spend the time and money to price the portfolio as the chance of winning the portfolio is relatively small. In such cases, it might make more sense to invite a smaller number of investors or introduce a two-round bid process. In the first round, all investors can make a non-binding offer and express their interest formally. The seller then can select a smaller number of investors based on the non-binding offer price to the next round with full due diligence. For the non-binding offer to succeed in selecting the most suitable shortlist of investors, it is important that the information provided to investors mainly in the form of a detailed data tape is as complete and accurate as possible. The shortlisted investors will then be given access to further information in a virtual data room. After the VDR due diligence is completed, the seller requests binding offers. Binding offers can be solicited as a single sealed bid or in two or more rounds with a first round binding offer in form of a sealed bid followed by a final bidding round in form of an auction with a last chance for the investor to reveal their best price. The final round can again be in the form of a sealed bid or a different auction format with different degrees of information revealed to the bidders.

In summary, clock auctions like an English auction are commonly used for certain types of NPL typically those that have lower due diligence (i.e. price discovery) costs and for processes that attract a relatively large number of bidders. For large complex transactions, the use of disclosed price auctions may deter investors and reduce a relatively small number of bidders even further. Partial bids may offer significant additional value to sellers and buyers especially where assets are heterogeneous or volumes are large.

For any asset class and process, providing high quality information to minimize uncertainty encourages investors to reveal their best prices and hence must be a priority for the seller in order to achieve the best possible outcome. Nobel laureate Paul Milgrom showed three decades ago that sellers can raise expected revenues by providing expert appraisals or inspection protocols. Better market transparency supported by the proposed data hub from the European Commission can encourage new investors to enter the market and help reduce uncertainty. Well-organised bid processes and the reputational risk of the participants help minimize the risk of collusion among investors.

Auctions at NPL Markets

NPL Markets is an innovative marketplace for illiquid loan trading, operating throughout Europe. The platform is based upon four pillars: data preparation, marketplace execution, analytics & valuation, and performance reporting. NPL Markets helps sellers of NPL to prepare and standardize transaction data and select the optimal transaction portfolio based on balance sheet impact. Our platform supports the entire transaction data lifecycle and assists sellers and buyers with loan valuation, deal structuring, ABS valuation and reporting tools. The NPL Markets platform allows the seller to choose the most suitable and efficient sales process and auction format depending on the asset class and timing expectations.

The seller using the online marketplace can choose between different sales methods for the best and final offer. As described above the same auction method might not work equally well for each portfolio of loans and sellers might prefer different auction methods. When setting up a transaction on the marketplace, the seller can set up the auction tailored to their specific needs. Before the auction, the seller has the option to include a Non-Binding Offer round and preliminary Binding Offer rounds to establish a short list of sellers invited to the final bidding round. Of course, the seller is always free to choose the traditional sealed bid tender which provides no information to the other bidders other than winning or not winning. Other auction types are available that do not necessarily reveal the winning bid price to the bidders. The Japanese auction format ratchets up the price in predefined increments and bidders have no information on the other bids. The English auction relays some information of where the bidder stands relative to the other bidders, but may not reveal the leading bid.

To set up an auction, the seller first chooses the auction types like Sealed or English and the seller can then adjust a number of parameters controlling the auction. The seller picks the bid currency, the start time and duration and whether the investor enters the bid in absolute currency amounts or in relative percentages of gross book value. The latter is relevant for future flow transactions or performing loans. The seller can control the starting price and minimum bid increments and the rules governing a potential extension of the auction period. The seller can choose to reveal a reserve price. For the English auction, the seller decides whether and how the leading bid information is revealed. Figure 1 shows some of the available settings the seller can adjust.

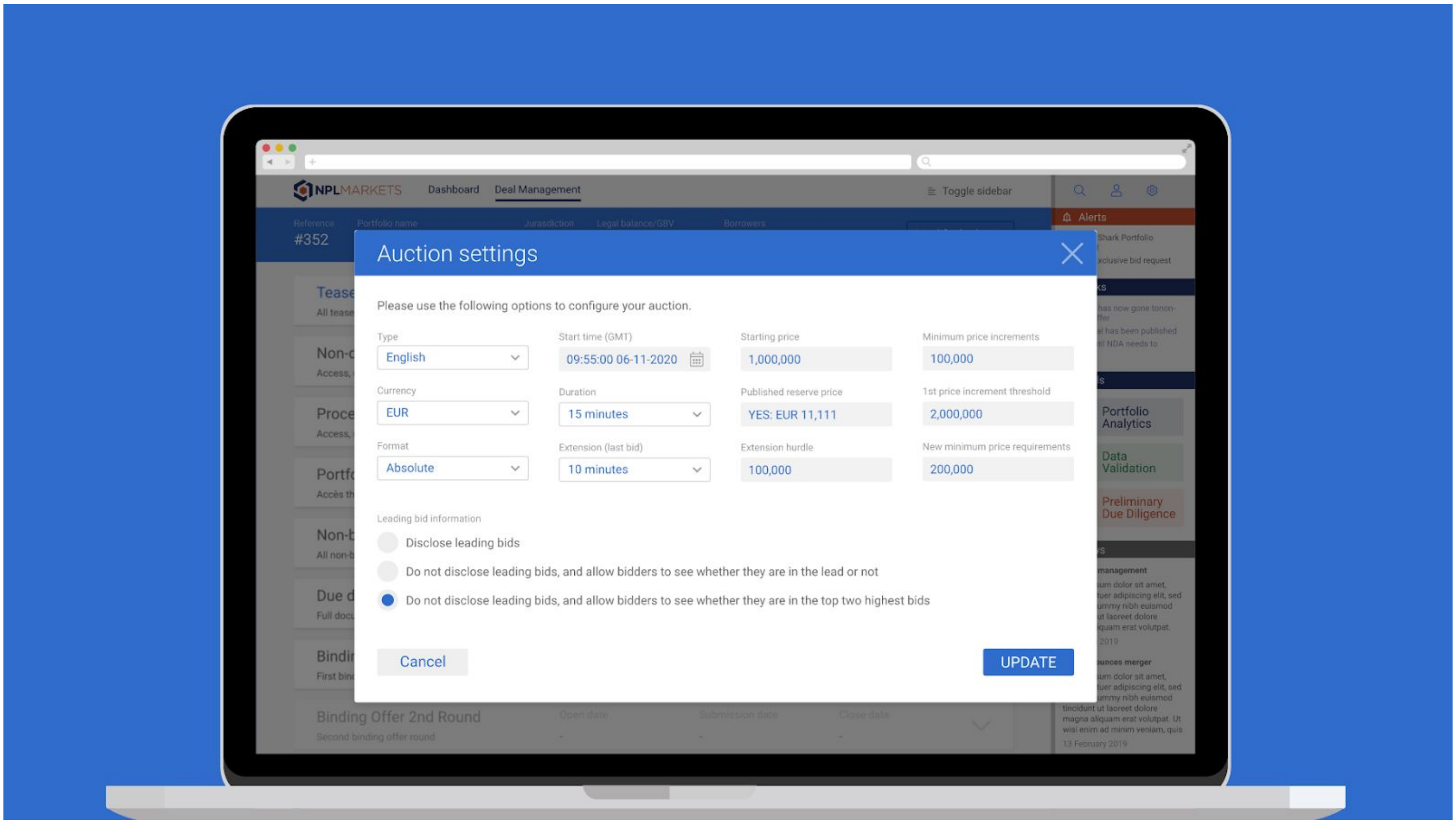

Figure 1: NPL Markets auction set up

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